



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,131	06/20/2003	Mathias Kokot	1014-065USD1	5964
72689 7590 03/06/2008 SHUMAKER & SIEFFERT, P.A. 1625 RADIO DRIVE, SUITE 300 WOODBURY, MN 55125				
EXAMINER				
MOORE JR, MICHAEL J				
ART UNIT		PAPER NUMBER		
2619				
NOTIFICATION DATE		DELIVERY MODE		
03/06/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ssiplaw.com

Office Action Summary

Application No.

10/601,131

Applicant(s)

KOKOT ET AL.

Examiner

Michael J. Moore, Jr.

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-92 is/are pending in the application.
- 4a) Of the above claim(s) 67-92 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I claims **1-66** in the reply filed on 12/10/07 is acknowledged. Therefore, claims **67-92** have been withdrawn from further consideration as being directed to a non-elected invention. It is requested that Applicant cancel the non-elected claims in response to this Office Action.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 1/12/04 and 5/15/06 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Objections

3. Claims **6, 20, 27, 32, 34, and 52** are objected to because of the following informalities:

Regarding claim **6**, on line 5, the word "on" after the word "stream" is not needed.

Regarding claim **20**, on line 5, the word "the" before word "multicast" should be "a" in this first instance.

Regarding claim **27**, on line 2, the word "an" before the word "multimedia" should be "a".

Regarding claim **32**, an objection is made to this claim as it is directed to "the network layer device" while it is dependent on claim **16**, which is a "method" claim.

Regarding claim **34**, on line 6, the word "to" is needed after the word "processor".

Regarding claim **52**, an objection is made to this claim as it is directed to "the method" while it is dependent on claim **42**, which is a "computer-readable medium" claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims **33-43** and **62-66** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claims **33** and **62** each claim "a computer-readable medium comprising instructions" which is vague and indefinite because it is unclear how a medium can comprise instructions. A medium can have instructions stored on it, recorded on it, etc., but it is not clear how it can just comprise instructions.

Claims **34-43** and **63-66** are also rejected since they depend from claims **33** and **62** and contain the same deficiency.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims **33-43** and **62-66** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims **33 and 62** are non-statutory because a "medium" cannot comprise "instructions", and as a result, the medium is just "instructions" and therefore fails to fall within a statutory category under 35 U.S.C. 101.

Claims **34-43 and 63-66** are also rejected since they depend from claims **33 and 62** and contain the same deficiency.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims **1, 2, 12-19, 21, 29-34, 43, 44, 51, 53, and 60-62** are rejected under 35 U.S.C. 102(b) as being anticipated by Hoebeke et al. (EP 1134932A1) (hereinafter "Hoebeke") cited in Applicant's submitted IDS.

Regarding claim **1**, "receiving a request via a network layer device for a multimedia service from a subscriber device" is anticipated by the network access server (network layer device) that receives an IGMP join request (request for multimedia service) from a subscriber as spoken of on page 4, column 6, lines 17-19.

Lastly, "dynamically configuring a control object stored by a data link layer device with the network layer device to control the data link layer device to provide data link layer functionality in accordance with the request" is anticipated by the network access server (network layer device) that informs the network terminal device (data link layer device) that a particular subscriber is to receive multicast data, and the subsequent

channel association (configuring control object) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim 2, "wherein receiving a request for a multimedia service comprises receiving a multicasting protocol message from the subscriber device, and dynamically configuring a control object comprises dynamically configuring multicast filter information stored by the data link layer device to control the data link layer device to perform multicast elaboration in accordance with the multicasting protocol message" is anticipated by the reception of an IGMP join request (multicasting protocol message) from a subscriber as spoken of on page 4, column 6, lines 17-19, as well as the subsequent channel association (configuring multicast filter information) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim 12, "sending a control message from the network layer device to the data link layer device" is anticipated by the associate message (control message) sent from the network access server (network layer device) to the network terminal (data link layer device) as spoken of on page 5, column 7, lines 10-12.

Regarding claim 13, "sending the control message via one of a virtual circuit and a virtual local area network that are reserved for transmission of the control message" is anticipated by the associate message (control message) sent from the network access server (network layer device) to the network terminal (data link layer device) via the multicast protocol channel AVCC (virtual circuit) as spoken of on page 4, column 6, lines 18-21.

Regarding claim 14, "sending an in-band Internet Protocol message" is anticipated by is anticipated by the associate message (in-band IP message) sent from the network access server (network layer device) to the network terminal (data link layer device) via the multicast protocol channel AVCC (virtual circuit) as spoken of on page 4, column 6, lines 18-21.

Regarding claim 15, "wherein the data link layer device comprises one of a switch, an access multiplexer, and a customer premises equipment device" is anticipated by the subscriber network terminal (CPNT) shown in Figure 3.

Regarding claim 16, "wherein the network layer device is a service edge router" is anticipated by the network access server (NAS) shown in Figure 3.

Regarding claim 17, "wherein the service edge router comprises a broadband remote access server" is anticipated by the network access server (NAS) shown in Figure 3.

Regarding claim 18, "a network layer device comprising a control unit that receives a request for a multimedia service from a subscriber device" is anticipated by the network access server (network layer device) that receives an IGMP join request (request for multimedia service) from a subscriber as spoken of on page 4, column 6, lines 17-19.

Lastly, "dynamically configures a control object stored by a data link layer device to control the data link layer device to provide data link layer functionality in accordance with the request" is anticipated by the network access server (network layer device) that informs the network terminal device (data link layer device) that a particular subscriber

is to receive multicast data, and the subsequent channel association (configuring control object) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim **19**, "wherein the control unit receives a multicasting protocol message from the subscriber device, and dynamically configures multicast filter information stored by the data link layer device to control the data link layer device to perform multicast elaboration in accordance with the multicast protocol message" is anticipated by the reception of an IGMP join request (multicasting protocol message) from a subscriber as spoken of on page 4, column 6, lines 17-19, as well as the subsequent channel association (configuring multicast filter information) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim **21**, "wherein the control unit receives a plurality of multicast protocol messages, replicates a multicast stream to produce a copy of the multicast stream, forwards the copy of the multicast stream to the data link layer device, and dynamically configures the multicast filter information to cause the data link layer device to replicate the copy for each of a plurality of subscriber devices in accordance with the multicast protocol messages" is anticipated by the multicast data replication and distribution by the network terminal (data link layer device) spoken of on page 4, column 6, lines 4-11.

Regarding claim **29**, "wherein the control unit sends a control message to the data link layer device to dynamically configure the control object stored by the data link layer device" is anticipated by the associate message (control message) sent from the

network access server (network layer device) to the network terminal (data link layer device) as spoken of on page 5, column 7, lines 10-12.

Regarding claim 30, "wherein the control unit sends the control message via one of a virtual circuit and a virtual local area network that are reserved for transmission of the control message" is anticipated by the associate message (control message) sent from the network access server (network layer device) to the network terminal (data link layer device) via the multicast protocol channel AVCC (virtual circuit) as spoken of on page 4, column 6, lines 18-21.

Regarding claim 31, "wherein the data link layer device comprises one of a switch, an access multiplexer, and a customer premises equipment device, and the network layer device comprises a provider service edge router" is anticipated by the subscriber network terminal (CPNT) (CPE device) as well as the network access server (NAS) (provider service edge router) shown in Figure 3.

Regarding claim 32, "wherein the network layer device comprises a broadband remote access server" is anticipated by the network access server (NAS) shown in Figure 3.

Regarding claim 33, "a computer-readable medium comprising instructions that cause a programmable processor to receive a request for a multimedia service from a subscriber device" is anticipated by the network access server (network layer device having computer-readable medium) that receives an IGMP join request (request for multimedia service) from a subscriber as spoken of on page 4, column 6, lines 17-19.

Lastly, "dynamically configure a control object stored by a data link layer device to control the data link layer device to provide data link layer functionality in accordance with the request" is anticipated by the network access server (network layer device) that informs the network terminal device (data link layer device) that a particular subscriber is to receive multicast data, and the subsequent channel association (configuring control object) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim 34, "instructions that cause a programmable processor to receive a multicasting protocol message from the subscriber device" and "instructions that cause a programmable processor to dynamically configure multicast filter information stored by the data link layer device to control the data link layer device to perform multicast elaboration in accordance with the multicast protocol message" is anticipated by the reception of an IGMP join request (multicasting protocol message) from a subscriber as spoken of on page 4, column 6, lines 17-19, as well as the subsequent channel association (configuring multicast filter information) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim 43, "instructions that cause a programmable processor to send a control message from a network layer device to the data link layer device" is anticipated by the associate message (control message) sent from the network access server (network layer device) to the network terminal (data link layer device) as spoken of on page 5, column 7, lines 10-12.

Regarding claim **44**, "storing a control object", "receiving a control message from a network layer device, the control message sent by the network layer device in response to a request for a multimedia service sent from a subscriber device to the network layer device", "dynamically configuring the control object based on the control message", and "providing data link layer functionality in accordance with the requested multimedia service based on the configuration of the control object" is anticipated by the network access server (network layer device) that receives an IGMP join request (request for multimedia service) from a subscriber as spoken of on page 4, column 6, lines 17-19, as well as the network access server (network layer device) that informs the network terminal device (data link layer device) that a particular subscriber is to receive multicast data, and the subsequent channel association (configuring control object) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim **51**, "wherein the network layer device is a service edge router, and the data link layer device comprises one of a switch, an access multiplexer, and a customer premises equipment device" is anticipated by the subscriber network terminal (CPNT) (CPE device) as well as the network access server (NAS) (provider service edge router) shown in Figure 3.

Regarding claim **53**, "a data link layer device, comprising a control unit to receive a control message from a network layer device, the control message sent by the network layer device in response to a request for a multimedia service sent from a subscriber device to the network layer device, dynamically configure the control object based on the control message, and provide data link layer functionality in accordance

with the requested multimedia service based on the configuration of the control object" is anticipated by the network access server (network layer device) that receives an IGMP join request (request for multimedia service) from a subscriber as spoken of on page 4, column 6, lines 17-19, as well as the network access server (network layer device) that informs the network terminal device (data link layer device) that a particular subscriber is to receive multicast data, and the subsequent channel association (configuring control object) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Regarding claim **60**, "wherein the network layer device is a service edge router, and the data link layer device comprises one of a switch, an access multiplexer, and a customer premises equipment device" is anticipated by the subscriber network terminal (CPNT) (CPE device) as well as the network access server (NAS) (provider service edge router) shown in Figure 3.

Regarding claim **61**, "wherein the network layer device comprises a broadband remote access server" is anticipated by the network access server (NAS) shown in Figure 3.

Regarding claim **62**, "a computer-readable medium comprising instructions that cause a programmable processor to store a control object, receive a control message from a network layer device, the control message sent by the network layer device in response to a request for a multimedia service sent from a subscriber device to the network layer device, dynamically configure the control object based on the control message, and provide data link layer functionality in accordance with the requested

multimedia service based on the configuration of the control object" is anticipated by the network access server (network layer device) that receives an IGMP join request (request for multimedia service) from a subscriber as spoken of on page 4, column 6, lines 17-19, as well as the network access server (network layer device) that informs the network terminal device (data link layer device) that a particular subscriber is to receive multicast data, and the subsequent channel association (configuring control object) carried out in the network terminal as spoken of on page 4, column 6, lines 18-30.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims **3, 20, 35, 45, 46, 54, 55, 63, and 64** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoebeke et al. (EP 1134932A1) (hereinafter "Hoebeke") cited in Applicant's submitted IDS in view of Deng (U.S. 6,937,608).

Regarding claims **3, 20, 35, 45, 46, 54, 55, 63, and 64**, *Hoebeke* teaches the method of claim **2**, the network layer device of claim **19**, the computer-readable medium of claim **34**, the method of claim **44**, the data link layer device of claim **53**, and the computer-readable medium of claim **62**, respectively. *Hoebeke* also teaches the associate message (control message) sent from the network access server (network layer device) to the network terminal (data link layer device) via the multicast protocol channel AVCC (virtual circuit) in response to receiving an IGMP join request (multicasting protocol message) as spoken of on page 4, column 6, lines 18-21.

Hoebeke does not teach dynamically configuring a multicast filtering table to associate one of a virtual circuit, virtual local area network, and an address that is associated with the multicast stream with one of a virtual circuit and an address that is associated with the subscriber device.

However, *Deng* teaches a method of multicast transmission where a multicast address table is used to associate the multicast address of an incoming packet with a multicast address of a host attached to the network as spoken of on column 4, lines 19-21 as well as lines 45-61.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the multicast address table usage teachings of *Deng* with the multicast teachings of *Hoebeke* in order to provide an

effective method of keeping track of incoming IGMP group join requests as spoken of on column 4, lines 59-61 of *Deng*.

12. Claims **4-7, 9-11, 22-24, 26-28, 36-38, 40-42, 47, 48, 50, 52, 56, 57, 59, 65, and 66** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoebeke et al. (EP 1134932A1) (hereinafter "*Hoebeke*") cited in Applicant's submitted IDS in view of Boura et al. (U.S. 6,947,418) (hereinafter "*Boura*").

Regarding claim **4**, *Hoebeke* teaches the method of claim **2**. *Hoebeke* also teaches the multicast data replication and distribution by the network terminal (data link layer device) spoken of on page 4, column 6, lines 4-11.

Hoebeke does not teach dynamically configuring a multicast filtering table to cause the data link layer device to replicate the copy of the multicast stream for each of a plurality of subscriber devices in accordance with the multicast protocol messages.

However, *Boura* teaches a method of multicast transmission where a multicast lookup table is used that includes a plurality of entries indicating numbers of times respective logical multicast data units are to be replicated as spoken of on column 2, lines 54-60.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the multicast lookup table teachings of *Boura* with the multicast teachings of *Hoebeke* in order to provide an effective method of keeping track of the replication parameters for different multicast streams as spoken of on column 2, lines 54-60 of *Boura*.

Regarding claims **5, 22, and 36**, *Hoebeke* teaches the method of claim **2**, the network layer device of claim **19**, and the computer-readable medium of claim **34**.

Hoebeke does not teach maintaining information that identifies multicast streams as one of premium and non-premium, determining whether the requested stream is a premium multicast stream, and dynamically configuring a multicast filtering table based on the determination.

However, *Boura* teaches a method of multicast transmission where incoming multicast data is monitored for conformance to a predetermined QoS level for subsequent storage in a particular class queue, and where corresponding replication information is adjusted in a multicast lookup table as spoken of on column 8, lines 53-62.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the multicast QoS teachings of *Boura* with the multicast teachings of *Hoebeke* in order to provide effective QoS guarantee in the multicast transmission.

Regarding claims **6, 23, and 37**, *Hoebeke* does not teach replicating the requested multicast stream on a per data link layer device basis when the requested stream is a premium multicast stream, and replicating the requested multicast stream on a per subscriber basis when the requested stream is a non-premium multicast stream.

However, *Boura* teaches a method of multicast transmission where incoming multicast data is monitored for conformance to a predetermined QoS level (premium) for

subsequent storage in a particular class queue, and where corresponding replication information is set indicating "N" number of replications of the particular multicast data satisfying the QoS requirements as spoken of on column 8, lines 53-62.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the replication teachings of *Boura* with the multicast teachings of *Hoebeke* in order to provide replication in accordance with QoS requirements.

Regarding claims **7, 24, 38, 47, 48, 56, 57, 65, and 66**, *Hoebeke* teaches the method of claim **1**, the network layer device of claim **18**, the computer-readable medium of claim **33**, the method of claim **44**, the data link layer device of claim **53**, and the computer-readable medium of claim **62**, respectively.

Hoebeke does not teach receiving a request for transmission of packets according to a QoS class for a unicast packet flow from the subscriber, and dynamically configuring a QoS profile for a layer-2 link.

However, *Boura* teaches a method of multicast transmission where a meter is used to determine whether each incoming unicast, multicast and/or spatial data unit conforms to a guaranteed QoS and correspondingly adjusts replication parameters (configure QoS profile) as spoken of on column 7, line 62 - column 8, line 6.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the replication teachings of *Boura* with the multicast teachings of *Hoebeke* in order to provide replication in accordance with QoS requirements.

Regarding claims **9, 26, 40, 50, and 59**, *Hoebeke* does not teach controlling the data link layer device to provide preferential queuing of packets of the packet flow based on the requested QoS class.

However, *Boura* teaches a method of multicast transmission where higher priority (preferential queuing) is given to data flows provided by the shared class queue as spoken of on column 6, line 67 – column 7, line 5.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the priority queuing teachings of *Boura* with the multicast teachings of *Hoebeke* in order to provide an effective method to guarantee expedited processing and transmission of data having QoS requirements.

Regarding claims **10, 11, 27, 28, 41, and 42**, *Hoebeke* teaches the network access server (network layer device) that receives an IGMP join request (request for activation) from a subscriber as spoken of on page 4, column 6, lines 17-19.

Hoebeke does not teach dynamically configuring a QoS profile for a layer-2 link to control the data link layer device to facilitate packet transmission for the subscriber in accordance with the service profile.

However, *Boura* teaches a method of multicast transmission where a meter is used to determine whether each incoming unicast, multicast and/or spatial data unit conforms to a guaranteed QoS and correspondingly adjusts replication parameters (configure QoS profile) as spoken of on column 7, line 62 - column 8, line 6.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to combine the replication teachings of *Boura*

with the multicast teachings of *Hoebeke* in order to provide replication in accordance with QoS requirements.

Regarding claim **52**, *Hoebeke* further teaches the network access server (NAS) (remote access server) shown in Figure 3.

13. Claims **8, 25, 39, 49, and 58** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Hoebeke et al.* (EP 1134932A1) (hereinafter "*Hoebeke*") cited in Applicant's submitted IDS in view of *Boura et al.* (U.S. 6,947,418) (hereinafter "*Boura*") and in further view of *Murphy* (U.S. 6,754,224).

Regarding claims **8, 25, 39, 49, and 58**, *Hoebeke in view of Boura* teaches the limitations as provided above.

Hoebeke in view of Boura does not teach where the unicast packet flow request is for a voice over Internet Protocol call.

However, *Murphy* teaches a method of multicast call signaling in a packet network, where multicast groups having multicast addresses participate in VoIP call setup and communication as spoken of on column 7, lines 3-11.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art, given these references, to apply the multicast teachings of *Hoebeke in view of Boura* with the VoIP teachings of *Murphy* in order to provide effective QoS support and replication in a VoIP environment.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ooghe et al. (U.S. 2003/0123453) is another reference considered pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571)272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached at (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Moore, Jr./

Examiner, Art Unit 2619

